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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,915	05/25/2001	Thomas Daniel	208608US0PCT	2083

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EXAMINER	
METZMAIER, DANIEL S	
ART UNIT	**PAPER NUMBER**
1712	

NOTIFICATION DATE	DELIVERY MODE
07/16/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/831,915	DANIEL ET AL.	
	Examiner	Art Unit	
	Daniel S. Metzmaier	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 Feb & 16 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10-14,16-18,20,21,23 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-14,16-18,20,21,23 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/23/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-7, 10-14, 16-18, 20-21 and 23-24 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3, 6-7, 10-14, 16, 18, 20-21 and 23-24 are rejected under 35 U.S.C. 103(a) as obvious over The Procter & Gamble Company, WO 97/46195, (hereafter Procter & Gamble), in view of Trinh et al, US 5,429,628 (example 9, column 25, lines 35-40) and **Modern Superabsorbent Polymer Technology**, edited by Fredric L. Buchholz and Andrew T. Graham, Wiley-VCH, pp. 97-101 (November 1997). Procter & Gamble (page 6, 2nd and 3rd paragraphs; examples and claims) discloses the

combination of silica, AGM, and zeolite as an odour control system in an absorbent article.

Trinh et al (example 9, column 25, lines 35-40) discloses AGM is commercial polyacrylate particles (Drytech 512 from Dow Chemical). AGM reads on said dried hydrogel.

Procter & Gamble (page 5, 2nd paragraph) discloses the odour control system may comprise sodium silicate as an essential component. Procter & Gamble (page 6, 4th paragraph) discloses the odour control system may be made employing spray drying, spray mixing, or agglomeration processes. Procter & Gamble further discloses the silicate itself may act as a binder for the odour control system. Procter & Gamble (page 6, 3rd paragraph) discloses the odour control system may be in the form of particulates, granulates, flakes, noodles, and exudates.

Modern Superabsorbent Polymer Technology (pp. 97 et seq) disclose the advantageous step of surface cross-linking to avoid gel blocking of soluble polyacrylic acids.

These references are combinable since they teach polyacrlate polymers for absorbent articles and odour control systems therefore useful for personal use articles, e.g., sanitary napkins and diapers. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to post cross-link the odour control systems taught in the Procter & Gamble reference, which employ polyacrylates for the advantage of avoiding gel blocking.

Trinh et al further (column 16, lines 47 et seq; and example 9) discloses forming odour control granules for absorbent articles comprising AGM and zeolite in particulate form by adding water, blending and drying. Trinh et al (column 16, lines 47 et seq) teaches gel formation and further teach silica materials.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the methods of intimately mixing the alkali silicate and polyacrylates as conventional in the art as shown by the Trinh et al reference.

To the extent Procter & Gamble differs from the claims in the value of n is not disclosed in the reference, applicants acknowledge the alkali silicates are commercially available. Applicants have not shown any criticality for the claimed ratio of alkali metal oxides to silica, which are commonly available sodium silicate.

4. Claims 4-5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Procter & Gamble Company, WO 97/46195, (hereafter Procter & Gamble), as evidenced by or in view of Trinh et al, US 5,429,628 (example 9, column 25, lines 35-40). Procter & Gamble (page 6, 2nd and 3rd paragraphs; examples and claims) discloses the combination of silica, AGM, and zeolite as an odour control system in an absorbent article.

Trinh et al (example 9, column 25, lines 35-40) discloses AGM is commercial polyacrylate particles (Drytech 512 from Dow Chemical). AGM reads on said dried hydrogel.

Procter & Gamble differs from claims 4 and 5 in the point of addition of the sodium silicate and the further combination of a neutralizing agent, i.e., alkali metal hydroxide or alkali metal carbonate.

Procter & Gamble (examples) discloses the use of neutralized polyacrylates. Changes in the order of process steps has been held to be *prima facie* obvious. See MPEP 2144.04(C). Furthermore, the use of conventional neutralizing agents, i.e., sodium carbonate, is within the level of one having ordinary skill in the art at the time of applicants' invention for the advantage of adjusting the pH of the system for the advantage of making it hypoallergenic as would be required in The Procter & Gamble reference.

Procter & Gamble differs from claim 17 in the use of sodium silicate rather than potassium silicate claimed but discloses metal silicates and specifically mentions sodium silicate.

These references are combinable since they teach absorbent materials for personal use articles, e.g., sanitary napkins and diapers. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ potassium silicate as an obvious functional equivalent to the sodium silicate and their structural similarity.

Response to Arguments

5. Applicant's arguments filed 23 February 2007 have been fully considered but they are not persuasive.

6. Applicants (pages 8 and 9) assert the references fail to disclose the process of adding the alkali metal silicate to the polymerization reaction mixture before drying. This has not been deemed persuasive since the P & G reference teaches the silicate, i.e., sodium silicate, may be employed as a binder in processes of conventional methods, utilizing spray drying, spray mixing or agglomeration processes. According, the silicate itself may acts as a binder. Said processes are prior to drying and the odor control systems are themselves absorbent materials. Applicants have not shown the compositions to be different than the prior art compositions for the breadth of the claims.

Furthermore, Trinh et al (column 16, lines 47 et seq; and example 9) discloses forming odour control granules for absorbent articles comprising AGM and zeolite in particulate form by adding water, blending and drying. Trinh et al (column 16, lines 47 et seq) teaches gel formation and further teach silica materials. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the methods of intimately mixing the alkali silicate and polyacrylates as conventional in the art as shown by the Trinh et al reference.

Applicants (page 9) assert that P & G do not disclose or teach the addition of the alkali metal silicate to absorbent gelling material (AGM) before drying. Applicants have not shown this to be critical for the scope of the claims and the Trinh et al reference discloses methods of intimately mixing the alkali silicate and polyacrylate ADM material as conventional in the art.

7. Applicants' (assertions regarding the absorbent articles have not been deemed persuasive since the odor control system in view of the P & G reference and the Trinh et al reference would have been an absorbent article.

8. Applicants (pages 9 and 10) assert the addition of the sodium silicate and sodium hydroxide is used and 74 % of the acid groups of the hydrogel are neutralized resulting in polymer particles distributed throughout the polymer particles. The claims are not commensurate with said argument and are silent regarding the degree of neutralization. The skilled artisan would clearly expect neutralization of the prior art materials, particularly when the silicate is explicitly taught as a binder.

Furthermore, applicants' declaration evidence (Dr. Manfred Essig, May 6, 2005) has not been deemed probative since it is not commensurate in scope with the claims and has not been shown to be an unobvious result in view of the prior art teachings.

9. Applicants arguments regarding the P& G use of colloidal silica rather than water-soluble sodium silicate has not been deemed persuasive since P & G (page 5, first full paragraph) explicitly discloses: "Alternatively, the silica may be provided from other sources such as metal silicates including sodium silicate." Said sodium silicate would have been expected to be water soluble as claimed. Furthermore, applicants (page 3, lines 1 et seq) characterize the preparation of alkali metal silicates is common knowledge as well would be expected of their water solubility.

10. Applicants (page 10) assert the skilled artisan would not be motivated to replace the colloidal materials of P & G and the Trinh et al reference with a solution of water soluble sodium silicate because one cannot obtain silicate distributed throughout the

particulate polymer material and solvated alkali metal silicate cannot have pores of the P & G silica. This has not been deemed persuasive since applicants' declaration evidence shows the silicate distributed within the particle and characterizes said silicate as marble-like. Said evidence does not show a lack of neutralization of the polymer carboxyl groups with sodium silicate and show distribution within the particles.

Furthermore, applicants set forth (page 3 of original specification) that the alkali metal silicates form silica when acidified. Thus upon neutralization, the expectation is the some colloidalization of some of the silicate.

Also, the P & G reference teaches the silicate acts as a binder. Said teaching is consistent with the neutralization and possible slight colloidalization of the silicate by the polymer acid groups.

11. Applicants (pages 10 and 11) assert that sodium silicate includes solid sodium silicate and would not require water soluble alkali metal silicate. This has not been deemed persuasive since solid alkali metal silicates are crystalline according to the Ullmann's reference. P & G (page 5) prefers non-crystaline silicate materials.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM